

In the Claims:

Please amend claims 23-25 and 35-39. Please cancel claims 20-22, 26, 33, and 34.

Please add new claims 47-49. The claims are as follows:

1-22 (Cancelled)

23. (Currently Amended) The bipolar transistor of claim 20 25, wherein the base current of said bipolar transistor is higher or lower than the base current of an identical bipolar transistor fabricated without said polysilicon grain size modulating species.

24. (Currently Amended) The bipolar transistor of claim 20 25, wherein the resistance of said emitter of said bipolar transistor is higher or lower than the emitter resistance of an identical bipolar transistor fabricated without said polysilicon grain size modulating species.

25. (Currently Amended) The A bipolar transistor of claim 20, comprising:

a collector;

a base; and

a polysilicon emitter containing a dopant species and a polysilicon grain size modulating species, wherein said dopant species is arsenic and is implanted into said polysilicon emitter at a dose of 1E15 to 2.3E16 atm/cm² and at an energy of about 40 to 70 KeV, and wherein said polysilicon grain size modulating species is antimony and is implanted into said polysilicon emitter at a dose of 1E15 to 1.5E16 atm/cm² and at an energy of 30 to 70 KeV.

26 (Cancelled)

27. (Withdrawn) A device comprising;

a polysilicon layer forming at least a portion of a structure of said device; and
said polysilicon layer containing a dopant species and a polysilicon grain size modulating
species.

28. (Withdrawn) The device of claim 27, wherein said dopant species is arsenic.

29. (Withdrawn) The device of claim 27, wherein said polysilicon grain size modulating species
is selected from the group consisting of antimony and carbon.

30. (Withdrawn) The device of claim 27, wherein said dopant species is arsenic and is implanted
into said polysilicon layer at a dose of 1E15 to 2.3E16 atm/cm² and at an energy of about 40 to
70 Kev, and wherein said polysilicon grain size modulating species is antimony and is implanted
into said polysilicon layer at a dose of 1E15 to 1.5E16 atm/cm² and at an energy of 30 to 70 Kev.

31. (Withdrawn) The device of claim 27, wherein the concentration of dopant is higher at a
predetermined distance from a bottom surface of said polysilicon layer than the concentration of
dopant at the same pre-determined distance from a bottom of an identical polysilicon layer of an
identical device fabricated without said polysilicon grain size modulating ion implantation step.

32. (Withdrawn) The device of claim 27, wherein said portion of a structure of said device is selected from the group consisting of polysilicon gates of field effect transistors, polysilicon gates of bipolar transistors, polysilicon lines of thin film resistors and polysilicon lines of damascened thin film resistors.

33-34 (Cancelled)

35. (Currently Amended) The A bipolar transistor ~~of claim 33, comprising:~~
a single-crystal silicon collector region;
a single-crystal silicon base region in said collector region;
a single-crystal silicon emitter region formed in said base region; and
a poly-crystalline silicon emitter layer in direct contact with a top surface of said emitter region, said emitter layer containing a dopant species and a carbon species, wherein the base current of said bipolar transistor is lower than the base current of an identical bipolar transistor fabricated without said carbon species.

36. (Currently Amended) The bipolar transistor of claim ~~33~~ 35, wherein the resistance of said emitter of said bipolar transistor is higher than the emitter resistance of an identical bipolar transistor fabricated without said carbon species.

37. (Currently Amended) The bipolar transistor of claim ~~33~~ 35, wherein a silicon grain size of said polysilicon emitter layer of said bipolar transistor is less than a silicon grain size of a polysilicon emitter layer an identical bipolar transistor fabricated without said carbon species.

38. (Currently Amended) The bipolar transistor of claim 33 35, wherein said dopant species is arsenic and is implanted into said polysilicon emitter at a dose of 1E15 to 2.3E16 atm/cm² and at an energy of about 40 to 70 Kev, and wherein said carbon species is implanted into said polysilicon emitter layer at a dose of 1E14 to 1E16 atm/cm² and at an energy of 15 to 35 Kev.

39. (Currently Amended) The bipolar transistor of claim 33 35, wherein said base region includes germanium.

40. (Previously Presented) A bipolar transistor, comprising;

- a single-crystal silicon collector region;
- a single-crystal silicon base region in said collector region;
- a single-crystal silicon emitter region formed in said base region; and
- a poly-crystalline silicon emitter layer in direct contact with a top surface of said emitter region, said emitter layer containing a dopant species and an antimony species.

41. (Previously Presented) The bipolar transistor of claim 40, wherein said dopant species is arsenic.

42. (Previously Presented) The bipolar transistor of claim 40, wherein the base current of said bipolar transistor is higher than the base current of an identical bipolar transistor fabricated without said antimony species.

43. (Previously Presented) The bipolar transistor of claim 40, whercin the resistance of said emitter of said bipolar transistor is lower than the emitter resistance of an identical bipolar transistor fabricated without said antimony species.

44. (Previously Presented) The bipolar transistor of claim 40, whercin a silicon grain size of said polysilicon emitter layer of said bipolar transistor is greater than a silicon grain size of a polysilicon emitter layer an identical bipolar transistor fabricated without said antimony species.

45. (Previously Presented) The bipolar transistor of claim 40, wherein said dopant species is arsenic and is implanted into said polysilicon emitter at a dose of 1E15 to 2.3E16 atm/cm² and at an energy of about 40 to 70 Kev, and wherein said antimony species is implanted into said polysilicon emitter layer at a dose of 1E15 to 1.5E16 atm/cm² and at an energy of 30 to 70 Kev.

46. (Previously Presented) The bipolar transistor of claim 40, wherein said base region includes germanium.

47. (New) The bipolar transistor of claim 25, wherein said dopant species is implanted into said polysilicon emitter at a dose of 1E15 to 2.3E16 atm/cm² and at an energy of about 40 to 70 Kev, and wherein said polysilicon grain size modulating species is implanted into said polysilicon emitter at a dose of 1E15 to 1.5E16 atm/cm² and at an energy of 30 to 70 Kev.

48. (New) The bipolar transistor of claim 25, whercin a concentration of dopant is higher at a predetermined distance from a bottom surface of said polysilicon emitter than a concentration of

dopant at the same pre-determined distance from a bottom of an identical polysilicon emitter of an identical bipolar transistor without said polysilicon grain size modulating species.

49. (New) The bipolar transistor of claim 40, wherein a concentration of dopant is higher at a predetermined distance from a bottom surface of said emitter layer than a concentration of dopant at the same pre-determined distance from a bottom of an identical emitter layer of an identical bipolar transistor without said polysilicon grain size modulating species.